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12	UNITED STATES DISTRICT COURT			
13 14	NORTHERN DISTRICT OF CALIFORNIA			
15	SAN FRANCIS	SCO DIVISI	CO DIVISION	
16	ORACLE AMERICA, INC.,	Case No.	3:10-cv-03561 WHA	
17	Plaintiffs,		E INC.'S RESPONSE TO S REQUEST RE "CUSTOM"	
18	v. GOOGLE INC.,	DETAIL	3	
19	Defendant.	Dept. Judge:	Courtroom 8, 19 th Fl.	
20	Defendant.	Juage:	Hon. William Alsup	
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Google provides this brief in response to the Court's questions about open-source licensing restrictions. ECF 1768. Google notes that the Opening Expert Report of Andrew Hall, ECF 1566-2, provides a more in-depth analysis of the below-described open-source licensing practices.

A. There are a variety of ways that software is offered on an open source basis.

"Open source" software is a fundamental part of a widely held philosophy concerning the commitment to maintain a free and open internet, as well as a business model that permits others to develop and differentiate software in a manner that promotes rapid innovation. *See, e.g.*Jacobsen v. Katzer, 535 F.3d 1373, 1378 (Fed. Cir. 2008) ("Open source licensing has become a widely used method of creative collaboration that serves to advance the arts and sciences in a manner and at a pace that few could have imagined just a few decades ago."); ECF 1563-7 (Leonard Rpt. ¶ 86-93). "Open source" software is not a one-size-fits-all term but, instead, encompasses a number of different approaches and licensing terms. Contrary to Oracle's perfunctory and inaccurate submission, ECF 1785, different open-source licenses offer a variety of terms and thereby support a variety of business practices. Examples of open source licenses include:

GNU General Public License ("GPL"): The GPL requires that distributors of GPL-licensed software make the source code for both the GPL-licensed software and any work derived therefrom available under the terms of the GPL. This latter part is called the "copyleft" effect: works that are derived from the GPL-licensed work are also subject to the GPL license, and therefore must also be open source. See Hall Op. Rep. at ¶¶ 34, 50. That copyleft effect is also described as "hereditary," "reciprocal," or "viral." Id. The GPL was first released in 1989, a version 2—often called GPLv2 or GPL-2.0—was released in 1991. GPL-2.0 is the most commonly used open-source license, and is categorized as a "strong-copyleft" license because of its fully copyleft effects. Id. ¶ 37. Oracle uses Linux software that is licensed under the GPL-2.0. Id. ¶ 53. The Linux Kernel in Android is also licensed under the GPL-2.0 (with certain exceptions). Id. ¶ 105.

GNU Public License version 2 with the Classpath Exception ("GPL-2.0 CE"): The

1	Classpath Exception modifies the GPL-2.0 license by permitting linking between copyleft
2	licensed software and other licensed software (e.g., closed-source or under other open source
3	licenses) without imposing a copyleft effect on the other software. This means that modifications
4	to the licensed software must itself be made available under the terms of the same copyleft
5	license; however, the terms of the license do not extend to the <i>entire</i> program with which the
6	licensed-software is linked. This is important for owners of, for example, proprietary closed-
7	source software, because they can link to copyleft software without having to disclose or license
8	their closed-source software. See id. ¶¶ 38-40, 56-57. For that reason, the GPL-2.0-CE license is
9	often characterized as a "weak" or "file-level" copyleft license. <i>Id.</i> ¶¶ 38, 40. The GPL-2.0 CE is
10	used for parts of Oracle's OpenJDK, including the class libraries with the declarations/SSO at
11	issue in this case. See id. ¶¶ 59, 111. For that reason, as explained in Mr. Hall and Dr.
12	Astrachan's reports, Google's use of the GPL-2.0 CE license permits linking to libraries including
13	the declarations/SSO without requiring developers or OEMs to "give back" the linking software.
14	Oracle mischaracterizes the GPL-2.0 CE license. First, Oracle wrongly states that the
15	license requires "not charging a fee for source code." ECF 1785 at 11. To the contrary, the GPL-
16	2.0 CE license states: "You may charge a fee for the physical act of transferring a copy, and you
17	may at your option offer warranty protection in exchange for a fee." GPL-2.0-CE, § 1 (available
18	at http://openjdk.java.net/legal/gplv2+ce.html) (emphasis added). Second, Oracle suggests that
19	"any modifications must be released under the same GPL v.2+CE license." ECF 1785 at 11-12.
20	While it is correct that modifications to the GPL-2.0-CE-licensed code must be released under the
21	same license, "Adam's code" (i.e., the code that he wrote himself and simply linked to the GPL-
22	2.0 CE code) need <i>not</i> be distributed under the same license. Again, the GPL-2.0 CE license
23	confirms this: "As a special exception, the copyright holders of this library give you permission to

and conditions of the license of that module." GPL-2.0-CE, "CLASSPATH" EXCEPTION (emphasis added). In other words, developers can keep their linking code closed source or

link this library with independent modules to produce an executable, regardless of the license

terms of these independent modules, and to copy and distribute the resulting executable under

terms of your choice, provided that you also meet, for each linked independent module, the terms

distribute that linking code under other open-source licenses (even those considered "incompatible").

Lesser General Public License ("LGPL"): The LGPL is another weak-copyleft license. Hall Op. Rep. ¶ 40. Similar to the Classpath Exception to the GPL-2.0 license, the LGPL allows linking to LGPL-licensed libraries without imposing a copyleft effect on the linking software. *Id.* ¶ 50. This license is used for the WebKit open-source library from Apple, which is used as the web browser engine on Android phones. Hall Reb. Rep. ¶ 25; Hall Reply Rep. ¶¶ 26, 56.

Apache-2.0 License: The Apache 2.0 license is a "permissive license" because it has no copyleft effect. Hall Op. Rep. ¶¶ 41, 44. Permissive open-source licenses may impose other requirements on distributors, e.g., to provide recipients of the licensed software with attribution, copyright, and disclaimer notices. But permissive licenses have no viral effect. *Id.* This means that software containing Apache 2.0-licensed software is not required to itself be licensed under the Apache-2.0 license, nor are there "give back" or publication requirements. Apache Harmony and most parts of Android use the Apache 2.0 license. *Id.* ¶ 47. Oracle, Apple, Cisco, and other major technology companies also use the Apache 2.0 license. *See id.* ¶ 46.

B. Not all open source licenses require that the licensee "donat[e] back to the open source public all improvements by the downloader."

In response to the Court's question, and as previewed above, not all open-source licenses require that the licensee "donate back all improvements by the downloader." This is the difference between "strong" copyleft, "weak" or "file-based" copyleft, and "permissive" licensing. The permissive Apache 2.0 license does *not* require licensees to contribute back their modifications to the open-source code. Rather, under the Apache-2.0 license, OEMs that use and modify Android for their devices can keep their changes to the software proprietary. *See id.* ¶ 48. Furthermore, Oracle is wrong to suggest that the absence of a "downstream" license requirement means that Android does not qualify as "open source." *See* ECF 1785 at 11. The Open Source Initiative lists the Apache-2.0 license as a "popular" open source license. *See* Open Source Initiative, "Licenses & Standards," *available at https://opensource.org/licenses*.

Indeed, the lack of viral effect for the Apache-2.0 and other permissive licenses is also true for the GPL-2.0-CE license, which Oracle used to distribute OpenJDK. OEMs or developers

can link to libraries licensed under the GPL 2.0-CE and they will not be required to license the linking modules under the GPL 2.0-CE license; they can instead keep their linking code proprietary or publish it under a different open-source license. In short, for software licensed under several different common open-source licenses, there is neither a custom nor a requirement of "donating back to the open source public all improvements by the downloader."

C. Open-source licensing does not preclude the sale of modified versions of the downloaded code for profit.

There is no custom preventing the sale of open-source software. To the contrary, a license that *prevents* software from being used commercially does *not* qualify as a "free" or "open-source" license. Hall Op. Rep. at ¶ 43. The Open Source Initiative, which popularized the term "open source," identifies ten criteria for software to be open source. One criteria is free redistribution: "The license shall not restrict any party from *selling* or giving away the software as a component of an aggregate software distribution containing programs from several different sources." *See* Open Source Initiative, "Open Source Definition," *available at* https://opensource.org/osd (emphasis added). A second criteria is no discrimination against fields of endeavor: "The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a *business*, or from being used for genetic research." *Id.* (emphasis added).

Similarly, the Free Software Foundation also instructs that free software may be used for commercial purposes. Per the Foundation:

"Free software" does not mean "noncommercial". A free program must be available for commercial use, commercial development, and commercial distribution. Commercial development of free software is no longer unusual; such free commercial software is very important. You may have paid money to get copies of free software, or you may have obtained copies at no charge. But regardless of how you got your copies, you always have the freedom to copy and change the software, even to sell copies.

Free Software Foundation, "What is free software?" *available at* http://www.gnu.org/philosophy/free-sw.en.html. (emphasis added).

¹ The definitions of "free" and "open source" software are not perfectly coterminous, but they share in common a prohibition on discriminating against particular uses of licensed software. *See* Hall Rep. \P 32. The terms are often used interchangeably. *Id*.

Accordingly, none of the above-listed open-source licenses prohibit commercial use or sale of the licensed software. *See* Hall Op. Rep. at ¶ 42. In particular, the GPL-2.0 CE license that Oracles uses for OpenJDK specifically allows the developer to sell her software.

Indeed, many companies use open-source-licensed software for commercial purposes. For example, IBM uses open-source code from the Apache Harmony project and OpenJDK in its Java developer kits. Transcript of Deposition of John Duimovich at 38:12; 100:10-22; 108:1-20. IBM has hundreds of commercial projects that use these Java developer kits, including, e.g., Websphere, Lotus Notes, and IBM Commerce. Duimovich Tr. at 82:4-85:8. IBM makes money by selling and servicing these programs. *Id.*. In addition, software company Red Hat sells open-source software products to other businesses, and recently reached \$2 billion in sales. *See* Barb Darrow, "Red Hat Is Now a \$2 Billion Open-Source Baby," Mar. 22, 2016, available at http://fortune.com/2016/03/22/red-hat-revenue-2-billion-open-source/. Likewise, so does Oracle. *See* Oracle and Open Source *available* at http://www.oracle.com/us/technologies/open-source/overview/index.html.

For an extensive list of commercial open-source applications and services, *see*:

https://en.wikipedia.org/wiki/List_of_commercial_open-source_applications_and_services. In addition, Mr. Hall lists different ways that companies can profit from open-source software. *See* Hall Op. Rep. ¶¶ 70-80.

D. Sun's so-called "specification license" does not contradict this industry custom

Oracle claims that "Sun had a license specifically covering declaring code and SSO: the Specification License. TX 610.1." ECF No. 1785 at 7:3-4. However, the specification license does not reference "declaring code," "SSO," "structure," "sequence," or "organization." The notion that it pertained to the use of declaring code or SSO (much less "specifically cover[ed]" them) is simply after-the-fact attorney argument that is inconsistent with the text of the license. Specifically, the specification license says that an "Independent Implementation" is an implementation that does **not** "derive[] from any of Sun's source code or binary code materials." But a compatible implementation of Java, by definition, would need to use the same method declarations (what Oracle now calls the "declaring code") as in Oracle's code, and so would *have*

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to contain—and therefore "derive from"—what Oracle now says is source code. That renders the specification license internally contradictory, and shows that Sun could not have intended to treat declarations as source code when it wrote the license.

Moreover, Oracle's current position on the specification license cannot be squared with past admissions, both in discovery and at trial. For example, at trial, Oracle's then-CEO, Larry Ellison, testified as follows:

Q: What is -- what is a clean room?

A: Well, if you take *a Java specification license* and you write your own version of Java, you have to do it in a clean room.

What that means is, you're not allowed to look at the Oracle version of Java, the source code. You're not allowed to look at our computer programs when you build your system. That's called a clean room.

In other words, it's cleansed of our intellectual property.

Trail Tr. 301:13-22 (emphases added). Here, Mr. Ellison admits that—as reflected in the specification license itself—the intellectual property that Sun/Oracle sought to protect was the *implementing* source code, not the declarations that one would by definition need to reference in order to create a compatible implementation of Java.

This accords with what former Sun CEO Jonathan Schwartz testified regarding practices at Sun surrounding the declarations:

Q: Were the APIs ever sold or licensed separately from the language?

A: No, of course not.

Q: And they were considered free and available as part of the language?

A: As part of the platform, yes.

Trial Tr. 1962:12-17.

Oracle has also admitted this in discovery. Google's Request for Admission No. 460 asked Oracle to admit that "Oracle has never licensed the APIs-at-Issue² separate and apart from any version of Java as a whole." Oracle's response was: "Denied that the APIs-at-Issue have

² "API-at-Issue" were defined as "the structure, sequence, and organization ('SSO'), including any declarations comprising the SSO, of the 37 Java API packages that were the subject of the Question 1A on the Phase 1 Special Verdict Form in the prior trial in this Action and/or as described in paragraph 2 of Oracle's Supplemental Complaint."

1	never been licensed; otherwise admitted." Oracle's admission that the APIs have not been				
2	licensed separately from any version of Java as a whole also contradicts its newfound argument				
3	that the so-called specification license was intended to give rights to the declarations specifically				
4	and separately from the rest of the Java platform.				
5	Google properly follows all the applicable open source license requirements with respect				
6	to its open source projects. With respect to Android, the source code is all made publicly				
7	available, including improvements made by Google, and Google provides Android for free.				
8	For all of these reasons. Orgale's arguments do not show a controdiction of the industry.				
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10	custom.				
11	Dated: May 3, 2016 KEKER & VAN NEST LLP				
12					
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